

**Hampton Harbor Bridge Project
Summary of Meeting
Public Advisory Committee (PAC) Meeting
Hampton Town Hall, 100 Winnacunnet Road
December 4, 2018, 4:00 p.m.**

Public Advisory Committee

Frederick Welch, Hampton Town Manager
Betty Moore, Hampton Historical Society
Brett Walker, Seabrook Police Chief (Acting)
David Walker, Rockingham Planning Commission
Seth McNally, NH Seacoast Greenway
Rep. Michael Edgar, District 21 (Hampton)
Sen. Thomas Sherman, District 24 (Rockingham County)
Catherine Silver, Hampton Resident
Kate Bashline, Hampton Resident
John Nyhan, Hampton Area Chamber of Commerce
Mary-Louise Woolsey, Hampton Board of Selectmen
Chris Jacobs, Hampton Director of Public Works
Jay Diener, Hampton Conservation Commission Chair
Chuck Rage, Hampton Beach Village District Chairman

New Hampshire Department of Transportation (NHDOT)

Jennifer Reczek, Project Manager
Bob Juliano, Bridge Design
Margarete Baldwin, Highway Design
Bob Landry, Bridge Design

HDR Consultant Team

Jim Murphy, Project Engineer
Mike Moser, Project Engineer
Jason Ayotte, Project Engineer
Jill Barrett, Public Involvement

The third Public Advisory Committee (PAC) Meeting for the Hampton Harbor Bridge Project was held on December 4, 2018 in the Selectmen's Meeting Room, Hampton Town Hall. Jennifer Reczek, the New Hampshire Department of Transportation's (NHDOT's) Project Manager, moderated the meeting. Ms. Reczek briefly noted that the project engineers have to determine three interrelated elements – horizontal roadway cross section (width), bridge clearance for vessels (height) and alignment (location) before a design is selected for development. At the previous PAC meeting on November 13, a consensus was reached that the team should proceed with a roadway width of two travel lanes, two 8-foot shoulders and two 6-foot sidewalks with bump outs. The study team is moving forward using this roadway cross section, subject to further review and approval.

Ms. Reczek said the purpose of the PAC meeting was to receive feedback on potential bridge options and select roadway alignments for further study. Bridge alignment could be in three locations – online (existing bridge placement), west or east of the existing bridge. In its evaluation, the team

would focus on roadway users, impacts of bridge/roadway reconstruction, constructability and cost. Key variables the team will consider include:

- Clearances for vessel navigation: Higher clearances improve navigation and reduce impacts to roadway traffic. Lower clearances reduce approach impacts
- East vs west vs existing alignment
- Roadway slope: Steeper slopes reduce approach impacts and improve navigation. Flatter slopes improve vehicular, bicyclist and pedestrian access
- Increase in roadway height at abutment: informs impacts to resources, right-of-way and facilities on approaches
- Constructability and Cost: Full cost estimates not developed at this stage, but are qualitatively considered

To facilitate discussion by the PAC, the project team developed options for three bridge profiles, each at a different elevation to provide underclearance for vessels: a bascule bridge at an elevation of 30 feet, a fixed bridge at 40* feet, similar to the General Sullivan Bridge in height, and a fixed bridge at 55 feet. Furthermore, the team examined placement of fixed bridges at these elevations on east and west of the existing alignment. HDR Project Engineer James Murphy noted designers had these considerations:

1. The roadway slope should be no more than 7%.
2. Horizontal navigational clearance for the channel could range from a maximum of 150 feet for a fixed bridge and 80 feet for a bascule bridge. Eighty feet is large enough to accommodate the Army Corps of Engineers dredge equipment. A wider opening for a bascule bridge is feasible but not practical. Currently the horizontal clearance for vessels is 51 feet.
3. The 150-foot wide navigational channel turns north, at a hard right, towards Hampton Harbor. It also turn south at a hard left, towards Seabrook Harbor. This will complicate the permitting process for the bridge.
4. A bridge height of 40 feet will accommodate most, and perhaps all vessels. The team has not found data on all users.
5. The team is planning for a 3.9-foot sea level rise. The heights provided above are in addition to the sea level rise value.

HDR Engineer Jason Ayotte gave an overview of the team's approach to studying bridge and horizontal alignments. For each option (online, east or west of the existing bridge) alternatives would take into account Right-of-Way and property impacts, capital and life cycle costs, environmental impacts, horizontal curvature and superelevation, sight distance, corridor consistency and maintenance.

If the bridge were built online, it would result in a full closure with regional detour of approximately 12 miles. Construction would take 2+ years depending on environmental restrictions. If a temporary bridge were used to avoid a lengthy detour, the costs would increase significantly – most likely \$20 million or more based on a similar project. Utilizing a temporary bridge would also lengthen the construction duration by one year or more for construction of the temporary moveable bridge.

East and west alignments could be built while the existing bridge remained in service. Impacts varied on each side. On the west side there could be impacts to businesses, state pier, navigational

channel, beach area adjacent to the south abutment, conservation area and utilities. On the east side residences, beach, sensitive habitat and state park would be affected.

Mr. Ayotte detailed vertical alignment considerations in its study. Elements included: navigational clearance, bridge superstructure (type and depth), high tide elevation, climate change, maximum profile grades, stopping sight distance and headlight sight distances. The impact of roadway slopes on pedestrians and bicyclist was also a factor in reviewing options.

Mr. Ayotte then presented a detailed description of three bridge options, utilizing aerial maps, charts and line drawings that illustrated various bridge elevations.

Fixed Bridge 55-foot Underclearance

- Provides largest underclearance for vessels
 - Clears USACE dredging equipment
 - Clears at least 97% of current usage
 - Provides significant improvement for horizontal clearance – 150'
- No bridge lifts required with fixed structure
- Provides steepest roadway grade – 7% slope
 - Less desirable for pedestrians and cyclists
- Largest Impact on Approaches
 - Increase height at abutment from 10'+
- East Alignment
 - Impacts residential parcels with some full acquisitions necessary
 - Impacts to State Park and Conservation Area
 - The use of retaining walls would mitigate any modifications to Campton Street, southeast of bridge
- West Alignment
 - May impact business parcels at the state pier, but mitigation with retaining wall possible
 - Impacts state pier access road
- Costs
 - Significantly lower capital costs compared to a bascule bridge
 - Decreased life cycle costs associated with operating the bridge and maintaining mechanical/electrical systems

Bascule Bridge – 30-foot Underclearance

- Provides improved underclearance for vessels
 - Vertical clearance accommodates clears USACE dredging equipment
 - Reduces lifts by over 50% based on current usage
 - Provides 80' horizontal clearance
- Bridge will be required to lift and will still affect traffic
- Provides desirable roadway grade – 4% slope
- Smallest Impact on Approaches
 - Low height increase at abutment: 5' +/-
- East Alignment
 - Impacts residential parcels with some full acquisitions necessary
 - May not require relocation of Campton St, but will impact it
 - Impacts to State Park and Conservation Area

- West Alignment
 - Impacts parcels in northwest (business parcels at the state pier), no full acquisition anticipated
 - Impacts state pier access road
- Costs
 - Bascule Bridge - significantly higher capital costs compared to a fixed bridge
 - Higher risk of costs associated with serviceability – system breakdowns can impact vehicular and vessel traffic
 - Increased life cycle costs associated with operating the bridge and maintaining mechanical/electrical systems

Fixed Bridge 40-foot Underclearance

- Provides improved underclearance for vessels
 - Clears at least 90% of current lifts at mean high tide
 - Clears all recurring users at mean high tide
 - Provides significant improvement for horizontal clearance – 150'
- No bridge lifts required with fixed structure
- Provides acceptable roadway grade – 5.5% slope
- Balances impacts on approaches
 - Height increase at abutment: 5'±
- East Alignment
 - Impacts residential parcels with some full acquisitions necessary
 - May not require relocation of Campton St, but will impact it
 - Impacts to State Park and Conservation Area
- West Alignment
 - Impacts parcels in northwest (business parcels at the state pier), no full acquisition anticipated unless requested
 - Impacts state pier access road
- Fixed Bridge - significantly reduced capital and life cycle costs compared to a bascule bridge

Ms. Reczek stated the higher the fixed bridge, the better the chance the US Coast Guard would approve the replacement option. The Coast Guard may permit a lower bridge if there was community support for it. She also said the team wanted to consider how high the vertical rise would be at the abutments. The team took a conservative approach, most likely identifying a higher threshold of impacts that may actually occur once the engineering is completed. It did not want to understate impacts to the public at this stage in the study only to learn later on impacts would be greater than originally stated.

Throughout the meeting PAC members asked questions and offered opinions. Members remarks are in italics and were responded to by the project team unless noted otherwise.

Fixed Bridge 55-foot Underclearance Discussion – Comments and Questions

If you show the height of the 55-foot in relation to bascule's operators house it would be a radical shock.

The height of this bridge may be scary for pedestrians and bicyclists.

The new bridge will have wider shoulders and sidewalk which may provide more comfort for people walking and cycling.

This option has the most impact on the north side, especially the commercial properties. Do you know who owns them?

Fred Welch: These buildings are rental properties owned by the State. I have the deed.

Bascule Bridge Discussion – Comments and Questions

The last thing we need is emergency personnel stuck on the bridge if the bridge is open for vessels.

Given the deterioration of the current bridge, won't a bascule be more subject to rust?

A new bascule span would not necessarily deteriorate more or faster than a new fixed bridge. Many of the photos of rust from earlier presentations were of the approach areas, in addition to the mechanical lift. The existing bridge has beams comprised of steel plates, which trap moisture and are subject to rust prying plates apart. Additionally, many of the mechanical components of the existing bridge are exposed, which will not necessarily be the case with a new bascule bridge.

How much additional clearance does raising the bridge to 30 feet give us, another 18 feet?

Yes, but if we factor in climate change, the future additional clearance may be approximately 15 feet.

When I came to this meeting, I wanted a bascule bridge. But, based on what you have presented, I now think a fixed is a better option and favor the west alignment.

Fixed Bridge 40-foot Underclearance Discussion – Comments and Questions

Are there any examples of vessels that can't fit under a 40-foot underclearance?

We have not identified any regular users. The larger dredging vessel cannot fit at high tide

Out of all the options, the 40-foot fixed bridge has the least impact on people and businesses.

Everybody gives a little. Nobody gives it all.

At 40-feet, there will be a need to make sure bike/ped improvements are implemented.

Vertical Clearance – Comments and Questions

If you have the vertical clearance further away from the bridge – east or west, would that have less impact on approaches?

We are looking to keep the curve normal. Moving the roadway substantially further away creates roadway curves that are not ideal of the travelling public.

Can you shift the channel southward to get more length and decrease slope?

This would increase the visual impacts to residents and further encroach on an area that is full of endangered species. We are trying to be sensitive to land impacts.

Chris Jacobs: I do not want to speak for the Army Corps but changing the channel would stop the current dredging effort that is underway. It would require environmental review and we might as well start all over again.

Would it help to elongate the approaches to decrease the roadway grade?

Yes, but that could increase the impacts

I like the drawn-out profile. Retaining walls will reduce impacts.

Is there a potential vessel height that would be limited by a fixed bridge?

Right now, with a bascule bridge height, is unlimited. A fixed structure would limit the vessel height, but base on what we have found the depth of the harbor and channel is a more limiting factor.

Are you considering a crosswalk under the edges of the bridge if the bridge has more vertical height?

This was also mentioned at the November meeting. It is something we can look at.

Will a 5-foot height of the abutment be able to accommodate a path underneath?

Dredging - Comments and Questions

US Senator Shaheen has a commitment for the dredging of Hampton Harbor next year. Will there be any problem with getting through the bridge?

The Army Corps of Engineers has the specs for the bridge and knows what they need for clearance.

Do you have a current map of the harbor, especially the sand islands?

Yes, we have this information as well as photography.

Dredging is supposed to happen next year. Who knows how long it will take to dredge again? Sand will fill in the harbor. We'll need to satisfy the Army Corps that the bridge will have enough clearance.

The clearance requirements are determined by the US Coast Guard. It will be built so the Army Corps of Engineers can get in and do their work.

This channel now is not wide enough. People need to go south to go north.

Do they understand this harbor?

Bob Landry (NHDOT): We're part of the dredging discussion with the Corps.

Planning and Construction – Comments and Questions

Are we past considering the Rehabilitation Alternative yet? The longer it takes, the more money it will cost to build the bridge.

All three alternatives, Rehabilitation, Bascule and Fixed, have to be carried through the environmental process. Studying the Rehabilitation Alternative is not delaying this project.

Do you have a construction cost? It will get more expensive every year.

The cost will be determined by the type of bridge that we build. That's what we're working on figuring out.

When you approach planning projects like this, what is your life expectancy goal? 50 years? 100 years?

Our goal is a 100-year life.

Will both the east and west bridge alignments allow the old bridge to stay open while the new bridge is built?

Yes. There will be a 4-5-foot space between the two bridges to enable the old bridge to be open during construction.

What about the power plant? What bridge type is preferred?

What we've heard is they prefer the fixed bridge because of the narrowness of the bascule bridge horizontal opening.

There are recurring access issues to the State Park and there should be some coming together of both planning efforts. The Hampton Beach Master Plan left off planning for that side of the road until the bridge planning was developed. It's an opportunity for both groups to address access.

The most important thing is to have the least impact possible.

General Comment and Questions

Are you going to be able to anchor the bridge on the south side as there is so much scouring there?

There are means to accommodate these conditions and therefore construct a safe bridge. The amount of scour may affect where the abutment is placed and the new bridge will be protected against future erosion.

Town of Hampton Director of Public Works: *We would like to have a sewer line hung from a fixed bridge.*

The Town is in the process of changing lighting. Can we get new lighting on the bridge?

The State will design any necessary lighting on the new or rehabilitated bridge. If additional lighting is desired, the Town or another entity would be asked to assume the operating costs.

The Town is using the same lighting contractor as the State but is not responsible for bridge lighting.

It will be important to maintain access to the beach in the west alignment.

Should there be a safety barrier that prevents people from dropping things off the bridge onto boaters below?

We could consider a fence at the center span.

Does the PAC favor an eastern or western alignment for bridge replacement?

A western alignment was favored by the PAC.

A fence would have a visual affect.

Netting could be used but that would have maintenance issues.

People have thrown rocks off the bridge onto boats. The most effective response has been from staff at the operator's house as they come out faster than police.

Is there a potential vessel height that would be limited by a fixed bridge?

Right now, with a bascule bridge height, is unlimited. A more limiting factor for bridge air draft is the depth of the harbor.

The meeting adjourned at 5:40 pm.